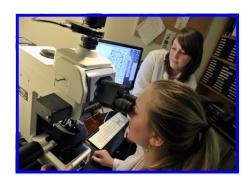
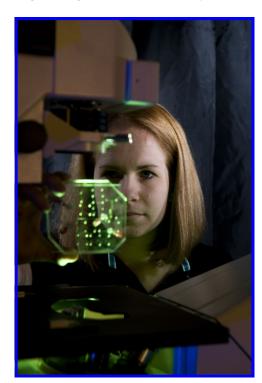
Education to Succeed in the Global Economy







The increasing global competition for the best and brightest minds demands that every U.S. citizen be better versed in science, technology, engineering, and mathematics (STEM). The National Science Foundation's (NSF) education and human resources investments respond to the nation's needs to improve science literacy; understand how people learn; better prepare STEM teachers; and develop the highly capable, diverse science and engineering workforce necessary for the U.S. to maintain its competitive edge in the global marketplace.



NSF is partnering with the Department of Education to launch a new evidence-based initiative, K-16 Math Education, to improve K-16 mathematics education and knowledge building. This new endeavor will support researchers and educators who have the greatest potential to transform mathematics learning. The program will offer incentives for state, local, and institutional decisionmakers to use evidence-based practices in mathematics instructional programs, and disseminate best practices and knowledge in mathematics education and learning for widespread use.

Transforming Undergraduate Education in Technology, Engineering and Mathematics (TUES), a multidisciplinary research program, will support reform of undergraduate STEM education. TUES research will help undergraduate teaching keep pace with advances in disciplinary knowledge and underpin the creation of new learning materials, teaching strategies, faculty development, and evaluation to directly impact education in practice.

The Widening Implementation and Demonstration of Evidence-Based Reforms (WIDER) program aims to move improved undergraduate STEM education instructional practices and curricular innovations to scale. This program will support research on how to achieve widespread sustainable implementation of undergraduate instructional practices,

leading to improved student outcomes.

Expeditions in Education (E²), a new cross-directorate, interdisciplinary effort, will infuse cutting-edge science and engineering into the preparation of a world-class scientific workforce for the twenty-first century, and ensure that all NSF education and workforce investments are drawing on the latest educational theory, research, and evidence.

Credits: Alex Thorpe, Oregon State Univ.; Argonne National Laboratory; Georgia State Univ.; John McCormick; Virginia Tech